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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,454	09/10/2003	Christopher J. Buehler	ITV-002	4885

51414 7590 11/17/2006

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EXAMINER	
SHERALI, ISHRAT I	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/659,454	BUEHLER, CHRISTOPHER J.	
	Examiner	Art Unit	
	Sherali Ishrat	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *19-28 and 30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6,7,9-13,15,17,18 and 29* is/are rejected.

7)☒ Claim(s) *3,5,8,14 and 16* is/are objected to.

8)☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/11/04, 4/5/04, 7/26/04, 3/17/05, 4/21/05, 7/25/05, 11/3/06, 6/8/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

1. Applicant's election of species 4 (corresponding claims 1-18 and 29) on 7/31/06 without traverse is acknowledged. Election requirement is made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 6,-7, 9-13, 15, 17, 18 and 29 are rejected under 35 USC 102 as being anticipated by (Olson et al., Moving Object Detection and Event Recognition Algorithm for Smart Cameras IMAGE UNDERSTANDING WORKSHOP VOL. I, 159-175) .

Regarding claims 1 and 29, Olson discloses computerized method of video analysis (Olson page 159, left column, Paragraph Abstract, lines 1-10 & Fig. 4) comprising:

receiving image data for a plurality of video frames depicting a scene that includes at least one of a plurality of background features (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, "background" with no

moving object and current frame with moving object), wherein (i) each of the video frames comprises a plurality of image regions (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, background and moving object) and (ii) at least one video frame has an object within at least one image region (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, current frame with moving object) ;

providing a plurality of background classifications each corresponding to one of the background features in the scene (Olson Fig. 9 & 11 page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, image scene with no moving object & Olson page 172, right column, Paragraph 6.2 Mapping the Environment lines 30-45, "floor", "Chair", and "doorway" are background classifications without moving object in the environment, mapping the environment corresponds to providing a plurality of background classifications each corresponding to one of the background features in the scene) and

assigning one of the background classifications to at least one of the image regions based at least in part on a location of the object relative to the image regions (Olson Fig. 11, page 172, right column, Paragraph 6.2 Mapping the Environment lines 30-45, person object exits [moving object] the hall via "doorway" [assigning one of the background classifications to at least one of the image regions based at least in part on a location of the object relative to the image regions] person exit the hall via doorway corresponds to assigning one of the background classifications to at least one of the

image regions based at least in part on a location of the object relative to the image regions).

Regarding claim 2, Olson discloses background classification is Floor (Olson page 172, right column, Paragraph 6.2 Mapping the Environment, lines 30-45, environment or background classification includes floor).

Regarding claim 4, Olson discloses background classification is obstruction (Olson page 172, right column, Paragraph 6.2 Mapping the Environment, lines 30-45, environment or background classification includes chair which is obstruction to the moving object).

Regarding claim 6, Olson discloses background classification is portal (Olson page 172, right column, Paragraph 6.2 Mapping the Environment, lines 30-45, environment or background classification includes doorway which is portal).

Regarding claim 7, Olson discloses determining whether object has newly appeared in a video frame (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, in the system of Olson difference image determines whether object has newly appeared in a video frame) and

determining the image regions in which the newly appeared objects are present (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, in the system of Olson binary image determining the image regions in which the newly appeared objects are present).

Regarding claim 9, Olson discloses determining object has newly disappeared (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, in the system of Olson difference image determines object has newly disappeared); and

determining the image region in which newly disappeared were last present in the previous (Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, in the system of Olson binary image determines the image region in which newly disappeared were last present in the previous frame).

Regarding claim 10 Olson discloses background classification includes counting the number of disappeared objects that disappeared from the image region (Olson Fig. 2).

Regarding claim 11 Olson discloses determining whether to track the object based on the background classification (Olson Fig. 11, page 172, right column, Paragraph 6.2 Mapping the Environment lines 30-45, error occurring because of chair moving).

Regarding claims 12 and 13 , Olson discloses determining the boundary of the object and determining top, side and bottom boundaries(Olson Fig 10 and Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15, in the system of Olson binary image determines the boundary of the object).

Regarding claim 15, Olson discloses tracking the object based on the size (Olson Fig. 11, page 172, right column, Paragraph 6.2 Mapping the Environment lines 30-45, error occurring because of chair moving).

Regarding claim 17, Olson discloses selecting the video frame that has an object (Olson Figs. 2 & 11 and Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15,); and

determining whether the object appears in one of the other video frame based on the background classification (Olson Figs. 2 & 11 and Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15,).

Regarding claim 18, Olson discloses selecting the video frame that has an object (Olson Figs. 2 & 11 and Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-15,); and

determining whether the object appears in one an earlier and later time of the other video frame based on the background classification (Olson Figs. 2 & 11 and Olson page 162, right column, Paragraph 3.1 Moving Object Detection, lines 1-1).

Allowable Subject Matter

4. Claims 3, 5, 8, 14 and 16 are objected as being dependent on rejected base claim but would be allowable if rewritten in independent form including limitation of the base claim and any intervening claims.

Communication

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 571-272-7398. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ishrat Sherali

November 1, 2006

ISHRAT SHERALI
PRIMARY EXAMINER